

Chapter 1

Multiple Choice

1. Unlike many other approaches to studying human behavior and experience, the evolutionary perspective helps us understand
- how these processes are learned.
 - how these processes came about.
 - the underlying biological causes.
 - why these processes occur.

Ans: a

2. Until the nineteenth century, philosophers and scientists generally viewed world and life on it as
- constantly evolving.
 - mysterious and unknowable.
 - stable and unchanging.
 - unstable and changing.

Ans: c

3. According to the author, the history of psychology can be conceptualized as an intellectual struggle between those who stress _____ and those who stress _____ as more important in shaping human behavior and thought processes
- conscious processes, unconscious processes
 - environmental factors, biological determinants
 - physical factors, psychological factors
 - the mind, the brain

Ans: b

4. Darwin's theory of natural selection
- began as a rich laboratory research tradition.
 - did not emphasize psychological processes.
 - explained many important psychological processes.
 - viewed humans as the pinnacle of evolution.

Ans: b

5. Data from around the world indicate that when a murder is committed it is
- just as likely to have been committed by a woman as a man.
 - ten times more likely to have been committed by a man than a woman.
 - ten times more likely to have been committed by a woman than a man.
 - usually committed by a person with a history of violence.

Ans: b

6. Considering psychology from an evolutionary perspective helps us to understand the tight coupling between
- a. conscious and unconscious processes.
 - b. genes and behavior.
 - c. instincts and learned behaviors.
 - d. organisms and their environment.

Ans: d

7. Ethology is the study of
- a. animals and their behavior.
 - b. how infants recognize their mothers.
 - c. human moral reasoning.
 - d. the chemistry of emotion.

Ans: a

8. The built-in pattern in which the newly-hatched birds of some species will follow an object that moves in front of them is known as
- a. imprinting.
 - b. innate template.
 - c. sensitive period.
 - d. social releaser.

Ans: a

9. One feature of imprinting is that it is quickly learned and does not require a number of occurrences; this is referred to as
- a. automatic processing.
 - b. fast-tracking.
 - c. instinctual behavior.
 - d. one-trial learning.

Ans: d

10. Which of the following is NOT true of a fixed action pattern?
- a. It can be modified to the situation.

- b. It is characteristic of a species.
- c. It requires no learning.
- d. It is released by a stimulus.

Ans: a

11. From an ethological perspective, Tinbergen (1963) suggested that there were four “whys” to be considered when studying behavior; which of the following is NOT one of them?

- a. Causation.
- b. Development.
- c. Evaluation.
- d. Function.

Ans: c

12. According to Eibl-Eibesfeldt, human ethology involves more than just extending animal processes to humans; it also has to take into account

- a. culture.
- b. intelligence.
- c. morality.
- d. sexuality.

Ans: a

13. According to Eibl-Eibesfeldt, adaptations reflect features of the _____ relevant to survival

- a. behavior.
- b. environment.
- c. organism.
- d. species.

Ans: b

14. Fisher put Darwin’s theory of natural selection on a more scientific footing by synthesizing it with

- a. Hamilton’s inclusive fitness research.
- b. Lorenz’s imprinting research.
- c. Mendel’s genetic research.
- d. Tinbergen’s ethological research.

Ans: c

15. One of Fisher's important mathematical demonstrations was that natural selection progresses through

- a. changes in the organism to fit the characteristics of the environment.
- b. cyclical patterns of rapid spurts of change following by long periods of stability.
- c. mutations that may or may not be beneficial to the species.
- d. the accumulation of many small changes in genes rather than a few large changes.

Ans: d

16. Dobzhansky explained the origin of species in terms of isolating mechanisms, which are factors that cause

- a. a part of a species to become isolated and begin to breed with each other.
- b. isolated catastrophic events which negatively impact the survival of a species.
- c. one gene to become isolated and replicate independently.
- d. some isolated members of a species to reproduce more effectively.

Ans: a

17. The so-called "modern synthesis" combines the study of _____ with the study of _____.

- a. biology, psychology.
- b. evolution, genetics.
- c. geology, biology.
- d. nature, nurture.

Ans: b

18. Altruism is a particular problem for the theory of natural selection because it involves behaviors that

- a. are always truthful.
- b. are not good for the species.
- c. could not have evolved.
- d. do not benefit the individual.

Ans: d

19. Hamilton explained altruism in terms of inclusive fitness, a property that can be measured by considering the reproductive success of both _____ and _____.

- a. the individual, its relatives

- b. the individual, the species
- c. the male, the female
- d. the parent, the offspring

Ans: a

20. According to Hamilton's rule, it is the _____ that benefits from an altruistic act.

- a. family
- b. gene
- c. individual
- d. species

Ans: b

21. Williams argued that the concept of _____ was used too loosely and should only be used when no other explanation is plausible.

- a. adaptation
- b. evolution
- c. gene
- d. species

Ans: a

22. Trivers developed a theory of reciprocal altruism that explains helpful behavior among

- a. family members.
- b. interbreeding groups.
- c. non-kin.
- d. offspring.

Ans: c

23. Trivers' theory of parental investment predicts that the sex that invests more in its offspring will have evolved to be more

- a. attentive to the needs of its relatives.
- b. caring and compassionate about others.
- c. discriminating in selecting its mating partner.
- d. likely to pass its genes on to the next generation.

Ans: c

24. Wilson's book *Sociobiology* created a controversy because the 1970s was a time when the social sciences assumed that

- a. all aspects of human behavior could be explained in terms of genes.
- b. experience determined almost all human psychological characteristics.
- c. natural selection was not a valid theory in the case of humans.
- d. synthesis was needed as well as a reduction to basic principles.

Ans: b

25. Bowlby proposed that we need to consider conditions in the environment of evolutionary adaptedness to understand the survival value of

- a. attachment behaviors in primates.
- b. both evolved and learned behaviors.
- c. present-day behaviors and experiences.
- d. the human body and its physiology.

Ans: c

26. The metaphor for the Standard Social Science Model is

- a. consciousness as the tip of an iceberg.
- b. the mind as a blank slate.
- c. the species as an organism.
- d. thought processes as computations.

Ans: b

27. Cosmides and Tooby's five guiding principles of evolutionary psychology do NOT contain which of the following?

- a. Consciousness is just the tip of the iceberg.
- b. Our modern skulls house stone age minds.
- c. The brain is a physical system.
- d. The mind is a blank slate.

Ans: d

28. According to Cosmides and Tooby, adaptive problems have been with us throughout our history as a species,

- a. and their solution affects the reproduction of individual organisms.
- b. and they will continue to be problems for the foreseeable future.
- c. but we have always been able to adapt to them.
- d. but with modern technology they are no longer a problem.

Ans: a

29. When the Wason selection task is framed as a(n) _____ problem, most people answer incorrectly; however, when it is framed as a(n) _____ problem, most people answer correctly.
- a. inclusive fitness, reciprocal altruism
 - b. logic, social exchange
 - c. individual, group
 - d. trivial, survival

Ans: b

30. Which of the following is NOT an assumption of the evolutionary psychology perspective?
- a. Psychological mechanisms are adaptations.
 - b. The environment strongly determines human behavior.
 - c. The human mind is not necessarily adapted to the current era.
 - d. There is a universal human nature.

Ans: b

Short Answer

1. Humans appear to be different from other _____ in that we walk upright, have little hair on our bodies, and have no natural predators.

Ans: Species.

2. The _____ not only helps us understand critical mechanisms involved in behavior and experience, it also gives us valuable perspectives on how insights into how those processes came about.

Ans: evolutionary perspective

3. _____ is the study of animals and what they do; it involves the naturalistic observation of behavior in an organism's natural environment.

Ans: ethology

4. _____ is a built-in pattern in which the newborn of some bird species will follow an object, typically their mother, that moves in front of them during the first day or so after birth.

Ans: imprinting

5. The limited time period during which a behavior can be acquired is referred to as the _____.

Ans: critical period *or* sensitive period

6. _____ is a measure of how much a behavioral pattern contributes to the survival of the offspring.

Ans: fitness

7. _____ reflect features of the environment relevant to survival; for example, the human visual system reflects the transmission of light through air.

Ans: adaptations

8. Dobzhansky argued that genetic mutations alone could not account for the evolution of new species; instead, what was needed was _____ that would, over time, make one population dissimilar to another related population.

Ans: isolating mechanisms

9. The question of why individuals would engage in behaviors that benefited others at their own expense is known as _____.

Ans: altruism

10. _____ is a property that can be measured by considering the reproductive success of the individual plus the effects of an individual's actions on the reproductive success of its relatives.

Ans: kin selection *or* inclusive fitness

11. Because humans lived in small groups during the evolutionary past, they developed a tendency to do favors for others with the expectation that they can receive help when needed; this is known as _____.

Ans: reciprocal altruism

12. The idea of _____ brings together questions related to mating behaviors, sexual selection and parenting; for example, it explains why human females tend to be choosier about sexual partners than males.

Ans: parental investment

13. The historical environment in which humans experienced difficulties, found food, mated and raised children, and formed and lived with others in social groups is known as the _____.

Ans: environment of evolutionary adaptedness (EEA)

14. The model of human behavior that assumes experience plays the major role and views the mind as a blank slate is known as the _____.

Ans: Standard Social Science Model

15. _____ have two characteristics: first, they have been with us throughout our history as a species; and second, they have an influence on the reproduction of individual organisms.

Ans: adaptive problems

16. People generally perform poorly on the logic problem known as the Wason selection task, unless it presented as a _____.

Ans: social exchange problem

17. Data from around the world indicate that when a murder is committed, it is _____ times more likely to have been committed by a man than by a woman.

Ans: 10

18. Imprinting involves both the characteristic behavior of the mother and the innate brain pattern or the hatchling; Lorenz suggested imprinting worked like a _____ and _____.

Ans: lock, key

19. Lorenz and Tinbergen experimented with the egg-rolling movement of the Greylag goose; they found that, once started, it continued even if the egg were no longer there, and they referred to this kind of movement as a _____.

Ans: fixed action pattern

20. The _____ combines the study of evolution by natural selection as developed by Darwin with the study of genetics as developed by Mendel.

Ans: modern synthesis

Essay

1. Altruism is a problem for the theory of evolution by natural selection. Why? Explain how Hamilton's and Trivers' ideas helped resolve this problem. Can you think of any examples of altruistic behavior that are still left unexplained?

Ans:

- Natural selection is about individual fitness, but altruism involves giving benefits to others at a cost to the self.
- According to Hamilton's idea of inclusive fitness, altruism benefits the individual's genes that are shared with relatives.
- According to Trivers' idea of reciprocal altruism, mutual exchanges help build social networks that increase fitness.
- Altruism toward strangers (neither kin nor friends) is still not adequately explained by current theories.

2. How did Dobzhansky define a species? How did he explain the evolution of new species?

Ans:

- A species is a group of animals or plants that mate among themselves.
- Genetic mutations lead to variation but not speciation.
- As a result of isolating mechanisms, one part of a species is isolated from the rest of the species.

- Through in-breeding, the isolated population becomes genetically different from the larger population.
- Eventually, the two groups can no longer interbreed even if brought together again, and so are now two separate species.

3. Describe the environment of evolutionary adaptedness for humans. How does it contrast with modern life? Why is it important to consider the EEA when searching for explanations for human behavior? Give an example or two.

Ans:

- The EEA for humans involved hunting and gathering of food, dealing with threats and opportunities in the natural world, and social organization in small groups where everyone knows everyone.
- Modern life entails easily accessible food, freedom from dangers of the natural world but novel dangers due to technology, and social organization in large anonymous groups.
- Our behavior is adapted to the EEA, and so is often mismatched to modern circumstances.
- Examples: mating preferences, food preferences, aggressive behavior.

4. Contrast the Standard Social Science Model with the Evolutionary Psychology approach. These two approaches reflect a much larger debate within psychology. What is it?

Ans:

- SSSM: human mind as blank slate; human behavior mostly learned; no such thing as human nature; wide variability in some behaviors due to culture.
- EP: there is a human nature; behaviors and experiences as adaptive products of evolution; many behaviors are universal across cultures.
- SSSM v. EP reflects nature v. nurture debate.

5. Evolutionary psychologists say there is a universal human nature. What do they mean by this? What assumptions are associated with this approach? What sorts of questions are easier to answer using this approach?

Ans:

- There is a tendency for individuals to display similar predispositions in similar environments throughout the world.
- Three assumptions: (1) universal human nature results from evolved psychological mechanisms; (2) these mechanisms are adaptations shaped by natural selection; (3) the human mind is adapted to hunter-gatherer lifestyle, not the current era.
- Only EP can adequately explain such aspects of human existence as kinship, morality, cooperation, beauty, motherhood, sexuality and violence.